Software Information Sheet

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General Information

Model Name:	WBA-12/13/14/15-SS/SU/SH/ SS2/SH2/SU2/SS3/SH3/SU3			SW.Req. No.		C20-088-01		A3553 / EO#3553
SW. Name:	WBA-12/13(USA)-SS ID-022/023			**Date:** (mm,dd,yyyy)		05/09/2008	**Rev:**	C1
SW. Version:	V3.75-03I			**Note:**				
Country (Code):	United States of America (USA)			**Guide:**		Type 1: 66mm		
Currency:	Dollar			**Check Sum:**		90D5		
Direction:	4-Way			**Kobetron ID:**		FH05		
				CRC (Seed= 0000):		B4F6		

Denomination: Years & MRI Ident #	Denomi.	Printed	Issued	MRI#	Denomi.	Printed	Issued	MRI#
	1	-	-	USD1.1	20	'90~'95	-	USD20.1B
	5	-	-	USD5.1A	20	'96~'01	-	USD20.2
	5	'93~	-	USD5.1B	20	'04	'03	USD20.3
	5	'99~	'00	USD5.2	50	90～93	-	USD50.1B
	5	-	'06	USD5.3	50	96～	-	USD50.2
	10	-	-	USD10.1A	50	04	04	USD50.3
	10	'90~'95	-	USD10.1B	100	88～	-	USD100.1A
	10	'99~	'00	USD10.2	100	90～93	-	USD100.1B
	10	'04	'06	USD10.3	100	96～	-	USD100.2
	20	88～	-	USD20.1A				

Accload Program:	V1.17 or newer.
ICB:	ICB feature is enabled or disabled with an ICB Enable / Disable barcode ticket.
Barcode Ticket:	N/A.
EPROM (WBA-13/15):	4 Mbit, 90 nano-second data access, or faster. ST Part M27C4001-90 or equivalent
Modifications:	

(Version 3.63-03I → 3.75-03I) – 05/2008
- **Banknote Recognition:** Added the next generation $5 (2006 Series) notes. (Released March 2008).
- **Banknote Recognition:** Added more data to improve acceptance of the $10 (2003 series).
- **Banknote Recognition:** Added counterfeit measures for the next generation $50 ('04) notes.
- **Machine Operation:** Improved sensor adjustment method to accommodate a wider range of sensor characteristics.
- **ICB:** If the Reset Command is received while writing to the ICB, Reset operation will be performed after the data has been completely written.

(Version 3.60-03I → 3.63-03I) – 06/2006
- **Banknote Recognition:** Added counterfeit countermeasures against $100 "Supernotes".
- **Banknote Recognition:** Added High Security $100 DIP switch selection. High Security mode allows better rejection of "Super Note" type counterfeits. (Selecting High Security may affect the $100 acceptance rate).
- **Banknote Recognition:** Improved recognition - $5 (1999 Series).
- **Banknote Recognition:** Improved recognition - $10 (1999 Series).
- **Banknote Recognition:** Improved recognition - NexGEN $10 (2004 Series).
- **Banknote Recognition:** Improved recognition - NexGEN $20 (2004 Series).
- **Banknote Recognition:** Improved recognition, all denominations.
- **Machine Operation:** DIP switch assignment change. $50 / $100 are now combined on DIP switch 6. DIP switch 7 is assigned to $100 normal / high security.

| Modifications Cont: | • **Machine Operation:** Added cleaning mode routine. Acceptor recognizes a custom cleaning card and enters a cleaning mode. (Card is drawn 3 times).

(Version 3.38-03I → 3.60-03I) - 02/2006
• **Banknote Recognition:** Added next generation $10(Series 2004).
• **Banknote Recognition:** Improved counterfeit $100 detection. (1996, 2001, 2003 series)
• **Banknote Recognition:** Improved counterfeit $50 detection. (2001, 2003 series)
• **Banknote Recognition:** Improved recognition of $50 banknotes (2004 Series).
• **Banknote Recognition:** Improved $5 (1999, 2001, 2003 series) facedown recognition.
• **Banknote Recognition:** Improved magnetic detection for $1 banknotes in the reverse directions.
• **Banknote Recognition:** Improved the security for $5 and $10 banknotes by improving the optical detection features.
• **Machine Operation:** The pusher home sensor is monitored more closely during the push operation. (WBA will enter an error state if any abnormality is detected during this operation).
• **Interface:** During test mode, (Dip Switch 8 "on"), communication is disabled.
• **Interface:** WBA checks for ICB components; if the ICB components are detected but ICB is disabled, then the WBA will report a hardware failure.
• **ICB:** Added ICB feature check. (If ICB modules are installed and determined to be disabled, then report an error. (Failure 03). (Led will flash with a repeated error code).
• **ICB:** Added banknote reject codes to ICB memory.
• **ICB:** Added currency assignment table to ICB memory.
• **ICB:** Modified ICB Cash Box Remove DATA/TIME to update every 30 minutes.

(Version 3.35-03I → 3.38-03I) – 04/2005
• **Banknote Recognition:** Counterfeit countermeasures: $10. (Variation of the counterfeit addressed in version 3.35-03i was still accepted in a few cases).
• **Banknote Recognition:** Similar countermeasures implemented for the $10 bill were also implemented for $5, $20 and Next Generation $20. (Pre-emptive change).
• **Banknote Recognition:** Countermeasures for high quality $50 and $100 counterfeit notes found during evaluation at the Federal Reserve Bank.
• **Machine Operation:** A $5, $10, $20 banknote is drawn into the path. Following the usual inspection, if the banknote was inserted green seal first, the WBA will move the banknote about ¼ inch for a final check before sending the denomination message.

(Version 3.34-03I → 3.35-03I) – 03/2005
• **Banknote Recognition:** Counterfeit countermeasures: $10.
• **Machine Operation:** Motor Speed check method was adjusted.
• **Banknote Recognition:** Improved $20 (2004) banknote recognition. (Added more data).
• **Machine Operation:** During Auto-calibration, the WBA will not listen to communication from the Host.

(Version 3.10-03I → 3.34-03I) – 08/2004
• **Banknote Recognition:** Added Next Generation $50 banknote recognition.
• **Banknote Recognition:** Improved $50 recognition. (2001 series).
• **Banknote Recognition:** Added $5 counterfeit countermeasures.
• **Banknote Recognition:** Improved $10 counterfeit detection.
• **Banknote Recognition:** Counterfeit countermeasures: $100 (Found in Japan and Taiwan).
• **Interface:** Improved CPU runaway detection. A CPU run-away event will be detected within 200 ms and corrected.

(Version 3.00-03I → 3.10-03I) – 02/2004
• **Banknote Recognition:** Counterfeit countermeasures: $5
• **Machine Operation:** Improved error checking. Software was changed to examine transport related errors more closely. The error must exist for at least 100 ms to be considered valid. |

Modifications Cont:	(Modifications since previous version 2.13-03) – 06/2002
	• **Banknote Recognition:** Added Next Generation $20 recognition.
	• **Banknote Recognition:** Added more 2001 series $50 data.
	• **Banknote Recognition:** Counterfeit Countermeasures: $1 found in California.
	• **Banknote Recognition:** $20 counterfeit countermeasures, 2 notes found in Washington State.
	• **Banknote Recognition:** Improved detection of hybrid notes.
	• **Banknote Recognition:** Counterfeit countermeasures: $100 found in Aruba.
	• **Banknote Recognition:** Counterfeit countermeasures: $100 found in Singapore.
	• **Banknote Recognition:** Counterfeit countermeasures: $50 found in Bulgaria.
	• **Machine Operation:** DIP switch assignment change: ID-022/023 Interface selection is now assigned to DIP switch #1. $50 enable / disable is now assigned to DIP switch #6. $100 enable / disable is now assigned to DIP switch #7.
	• **Interface:** Stacked sequence is now sent after a bill completely passes the feed-out sensor.
	• **Interface:** Un-used area in the file is now set to 0 instead of 1. (Mississippi regulation).
	• **ICB:** ICB functions and features are now included as standard in the software. ICB is enabled / disabled via set ticket method.
	• **ICB:** ICB memory now includes data for acceptance rate calculation.
	• **ICB:** ICB cashbox counter allows for multiple insertion / removal events.
Memo:	

Dip Switch Settings

#		Dip Switch	
1	OFF	**Interface Selection ID-023**	
	ON	**Interface Selection ID-022**	
2	OFF	**1**	**ENABLE**
	ON	**1**	**DISABLE**
3	OFF	**5**	**ENABLE**
	ON	**5**	**DISABLE**
4	OFF	**10**	**ENABLE**
	ON	**10**	**DISABLE**
5	OFF	**20**	**ENABLE**
	ON	**20**	**DISABLE**
6	OFF	**50/100**	**ENABLE**
	ON	**50/100**	**DISABLE**
7	OFF	**100**	**Normal Security**
	ON	**100**	**High Security**
8	OFF	OFF	
	ON	TEST MODE	
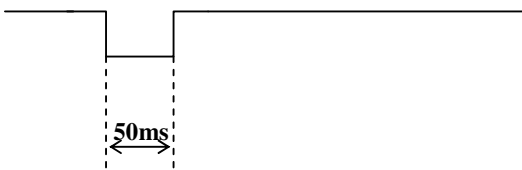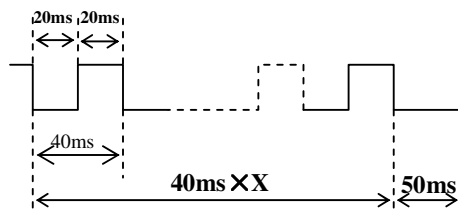
ID-023 "Denomination" Code Value

Code Value	Denomination
0	**1**
2	**5**
3	**10**
4	**20**
6	**50**
7	**100**

ID-023 Country Code Value

Code value	Country
37	USA

ID-022 Credit Pulse

Denomination	Credit Pulse	
1		(pulse diagram, **50ms**)
5	X=4 times	(pulse diagram, 20ms, 20ms, 40ms, **40ms✕X**, **50ms**)
10	X=9 times	
20	X=19 times	
50	X=22 times	
100	X=24 times	

DIRECTION DATA

Sample demonination:100
A ← [Front 100] → B
(FA)   (FB)
D ← [Back] → C
(BB) 100   (BA)